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**"LMI and DoD-Sponsored FFRDCs:  
Critical to National Security"**

**Address of  
The Under Secretary of Defense for Acquisition and Technology  
Honorable Paul G. Kaminski**

**to the  
Logistics Management Institute  
Ritz-Carlton Hotel, Tyson's Corner VA**

**November 21, 1996**

Good evening. For nearly a half century now, America has invested heavily in the growth of a strong research and development establishment to sustain the technological supremacy of US combat forces. Our investment has served us well through the years.

Today, the Department of Defense (DoD) sponsors 12 not-for-profit, federally funded research and development centers. Each of them have some very different missions. And they have some very different compositions.

**FFRDCs: A CRITICAL NATIONAL ASSET**

As I have testified before the Congress, FFRDCs are a very critical national asset. I believe so for four basic reasons. First, they maintain long-term strategic relationships with their DoD sponsor – here at LMI, it is primarily OSD. But LMI retains important strategic relationships with all elements of the Defense Logistics community. Second, they perform the research, development and analytic tasks that are integral to the mission and operations of their DoD sponsor. Third, they maintain “core” competencies in areas important to their sponsors and employ this expertise to perform high quality, objective work that cannot be carried out as effectively by other private or public organizations. And fourth, they operate in the public interest, free from real or perceived conflicts of interest. These are really the four key underlying reasons why FFRDCs are indispensable to national security.

These factors were among the considerations which led the Defense Science Board to conclude about a year and half ago in their independent review that: “FFRDCs should be retained on the strength of their quality and the special relationships they have with their sponsor’s on matters of great importance to the DoD.” And incidentally, every single independent review and every inquiry that I have conducted has come back to confirm this basic conclusion. It’s my sense that as the Department downsizes,

FFRDCs have become increasingly important as centers of independent technical expertise and support.

The bottom line is that I believe – and this belief is held widely in the Department, both by civilian and military leaders – that FFRDCs are doing high-quality, high-value technical and analytic work that could not be provided as effectively by other means. Let me assure you that the people who are complaining about FFRDCs are not the users of their services or the recipients of their products. FFRDCs are doing their jobs for DoD and they're doing them well.

The essence of their value to DoD lies in the qualities that I mentioned previously, starting with the long-term strategic relationship. I might note that this is one area where DoD has been in front of the commercial sector in its acquisition practices. Successful commercial firms are moving increasingly in the direction of establishing long-term, strategic relationships with their key suppliers. They have found the result is often a higher quality product, at lower overall costs, in contrast to the previous practice of changing suppliers based on recurring, short-term low bids. DoD has long realized this benefit from FFRDCs.

I am not arguing that competition is inappropriate. The Department uses competitive processes to obtain the overwhelming majority of the goods and services that we require. But there are some circumstances and some kinds of work, for which the value provided by a strategic relationship far outweighs the potential gains of competition. Even in a long term relationship, if we are dissatisfied with the work performed, we have the opportunity for a "dissimilar competition" and outsource that work with another FFRDC.

## PROGRESS WITH THE CONGRESS

We have had a very difficult period over the last three years. We've seen the Congress put various restraints on FFRDCs, including the somewhat arbitrary ceilings placed on expenditures, various restrictions on management, executive and employee compensation limits, and various other restraints on operations. One might almost get the message that you are not wanted if you look at this list of restrictions and constraints.

I've made a commitment over the last 18 months to work with the Congress on these issues because I believe that our FFRDCs in general and LMI in particular, are a very critical national asset that we need to continue to nurture and effectively exploit to leverage DoD operations.

On the whole, I've been working with very good support from most of the Congress in general on all of these issues. We were successful this year in having our

issues heard in a full hearing before the Military R&D Subcommittee of the House Committee on National Security. I think this session went extremely well. We have been working to move away from the arbitrary financial caps, instead to work to a program that I would describe as "core workload" – and manage on this basis rather than the imposition of arbitrary financial ceilings. The core concept gets at the heart of the special strategic relationship that exists between the DOD and our FFRDCs. It is difficult in some cases to define "core workload" with two or three digits of accuracy, but we have developed definitions and as we continue to fine tune them they are gaining wide acceptance as a workable approach.

We have also been working to systematically move away from what I would call impositions on management of FFRDC operations. The Department's management initiatives, such as the FFRDC Management Plan and Five-year Plan, have convinced most of our critics that we have effectively addressed their concerns about our management and use of FFRDCs. Specifically, I think we are becoming effective in making the case that the Department will "stick to its knitting" where FFRDCs are concerned – using FFRDCs to perform only this critical "core" work for which they were established. And for those we have not fully convinced, I pledge to continue my efforts to work to convert the few remaining critics.

This is not something that was completely solved in this session of Congress, but I believe we have made significant steps forward at this point. And I believe we will see the momentum generated thus far will carry us further if we do as we say we would – I see the glass as a little more than half full. We've had generally supportive language in the Congress this year, but there's still some work ahead as we begin to resurrect and provide the kind of long-term basis for planning and stability that we need to be able to exploit the full potential of our FFRDCs.

In the end, it comes down to people. It means first attracting, then keeping the best and brightest. It's hard to attract good people with the kind of restraints that have been imposed. To keep good people, we must give challenging work – worthy of respect from one's peers.

I am cautiously optimistic that continued sound management by DoD will result in elimination of ceilings and compensation caps by Congress in fiscal year 1998. These are issues that will continue to be at the core of my priorities. I will tell you that I've devoted a lot of time to these issues because it's a battle that must be fought and won. It takes time to build an organization like LMI. It's fragile – easy to destroy, hard to rebuild.

## FUTURE OPPORTUNITIES

Now, let me spend just a few minutes talking about the future – where we are headed and maybe a little about the role that you'll have to play in that future.

It is my sense that logistics – logistics re-engineering to be more precise – will become a key area of focus during the upcoming Quadrennial Defense Review. LMI has many of the unique core competencies needed to help the Department shape future logistics.

The Department's emphasis on focused logistics is a story that began two years ago. At that time, I asked about inventory turns – got a lot of strange looks. Our inventory turns was something like one-sixth. Jim Klugh was the Deputy Under Secretary of Logistics back then and started addressing my issues. John Phillips has now come on-board. And we have been executing a plan to reduce our stock levels from about \$107 billion to about \$55 billion between 1989 and 1999 – today we are slightly below \$70 billion.

Eighteen months ago, I gave a speech at an AFCEA Conference in Dayton in which I laid out a vision for DOD logistics. I characterized the DoD logistics system as a "just-in-case" system and that we had to move more in the direction of a "just-in-time" system.

One year ago, I discussed this vision at a CINC's Conference hosted by General Shalikashvili and General Joulwan. Last summer, the Defense Science Board endorsed the need for focused logistics as part of an overall strategy to reduce the support "tail" and generate funds for modernization.

The stars are now all aligned to make this happen. There is demand pull from the warfighters. There is an exceptionally able team in John Cusick, John Phillips, and the Joint Logistics Commanders. There is commitment at the top from Bill Perry, General Shalikashvili and the Service Chiefs.

Archimedes once said "Give me a fulcrum and a lever and I will move the world." Today, focused logistics is the fulcrum and LMI is part of the lever for moving forward towards a 21<sup>st</sup> century warfighting force.

Wholesale re-engineering, in the context of a fully integrated system-of-systems architecture, needs to be addressed if logistics is to become a force multiplier in the 21<sup>st</sup> century battlespace. I believe LMI is in a position to serve as a lever to help the Department work through the answers to re-engineering questions. My sense is that the logical outcome of a seamless warfighter – logistician partnership will lead to at least two guiding principles for battlespace logistics: one, reduce the logistics response time; and two, reduce the logistics infrastructure.

## REDUCING LOGISTICS RESPONSE TIME

I think many of you agree that there is a large opportunity for improving logistics response times in the Department today. We need to think in terms of substituting fast transportation and real time information for layered inventory as a strategy for improving logistics response times.

### Fast Transportation

Our "just in case" system has evolved over the years in response to a cumbersome acquisition system, little or no in-transit asset visibility, and lack of a fast and responsive transportation system. This is where the commercial sector was in the 1950s. This system is in stark contrast to the "just in time" material management systems being implemented by commercial enterprises. Boeing and Caterpillar are two companies that substitute fast, cheap transport for costly inventory. As a result, they have a world wide guarantee of parts delivery in 24 hours, and in some cases no charge if the delivery timeline exceeds 48 hours. Federal Express has implemented the kind of transport system that allows other companies to reduce their inventories as well.

Neither the "just in case" or "the just in time" system are right for the Defense Department. A tailored approach is needed. Right now, the pendulum is too close to "just in case." It needs to swing more to a "just in time" position. But 'just in time' means that the wartime transportation system must work when fully stressed in war. It means we need to routinely exercise this system under stressful conditions so we know its limitations and can plan and adjust accordingly.

I believe we have established a high level of confidence among the Department's leadership that transportation can often be a sound substitute for layered inventories. Again, the immediate challenge we face is getting on with the business of deploying a broad based transportation initiative in order to free up billions of dollars we must now commit to inventory investment -- investment that will be unnecessary in a lean logistics environment.

### Real-Time Information

Much like the transportation issue I just spoke about, we must substitute valid real time information regarding the complete status of all our resources... personnel, weapons, equipment, and supplies and so forth... for our current practice of maintaining redundant capabilities. Here I am talking about getting on with the business of deploying a true total asset visibility program. LMI is helping us design the architecture to support

Commanders and logisticians will need to know the combat readiness status or "state vector" for each force element. This includes knowing the logistics posture of friendly and enemy forces as well as having a prediction of the resupply needs of each force element. To complete the logistics picture, available support and the need for future support must be propagated from each force element in the field through the whole support system.

A major system integration effort is needed to implement this logistics concept. It is my sense that most of the enabling technologies have been developed. Some of the information technologies that could immediately be brought to bear include: bar code tagging technology; RF smart response tags; relational data base systems; miniature global positioning system receivers and position reporting transmitters; satellite and fiber command & control communications links; and predictive planning tools.

Technology is not the hurdle we must overcome. The challenge is building a high powered cross-service team that focuses our energies to the task of developing and deploying a broad based system. It would need to function like a DOD-wide intranet where everyone has access to the same information base. To do this, the real issue is having the right incentives in place to make it happen.

The Department is planning to operationally deploy a pilot asset visibility program this coming January. It will provide the field commander with the ability to "see"—in real time—virtually all materiel stocked by any Service or Defense Agency. It is a good start down the road toward a robust Asset Visibility program—but it's not the end game. It's a necessary condition—one that must be demonstrated to the operators in order to make the case for fast transport.

Today, the warfighting communities are seeking to look over the time horizon, into the future battlespace to play out myriad combat scenarios in a virtual environment. In the future, when the operators are confronted with a specific near term threat, they will be able to rapidly model the situation, test a host of alternative solutions, calculate weaknesses, make corrections to strategies and tactics, and alter the outcome.

The logistics community needs to craft a companion capability. To that end, Admiral Ray Archer, my logistics Technology Development lead, recently demonstrated a logistics business process in a simulated environment. This demonstration focused on simulating the deployment of a Marine Regiment from two separate locations within the United States to marshaling and staging positions in Western Europe. The simulation factored in known aircraft capabilities and graphically displayed the entire process. It also provided metrics on resource movement. The model allows the user to "what if" various events and constraints.

The model Admiral Archer is testing is still immature. However, adoption of this expanded vision of Asset Visibility -- to include looking into the future through the use of sophisticated modeling -- represents a quantum step forward. It breathes life into J-TAV, transforming it from an accessible data library to a high powered tool for maximizing weapon system readiness on the battlefield of the 21<sup>st</sup> century.

As the warrior becomes comfortable that he knows the full range of his materiel requirements -- where the materiel he needs is -- at all times, -- and how long it will take to get to him, -- the requirement to own and hold stock will be dramatically reduced. After all, the warrior's real objective is assured availability, not full time possession of mountains of "just-in-case" inventory.

## **REDUCING LOGISTICS INFRASTRUCTURE**

And the second guiding principal must be to reduce unnecessary logistics infrastructure. Within the department, the warfighters have come to clearly realize that it is a zero-sum game, that every logistics dollar expended on outdated systems, inefficient or excess organic capability and unneeded inventory is a dollar not available to build warfighting capability. They also realize that the logistics slice of the defense budget is large by any measure -- consuming over \$43 billion or about 17 percent of the DOD top line each year. It is roughly the same amount we spend on procurement.

There is no question in my mind that there are many areas where private sector logistics support can be substituted for DOD organic capabilities with greater effectiveness, at less cost, and with no added risk. I also believe it is equally important to avoid privatization for the sake of privatization. I believe it is absolutely essential for the Department to strike the proper balance between efficiency, effectiveness and risk.

For example, the Defense Logistics Agency has reduced its wholesale medical inventory by 60 percent -- 380 million dollars -- since 1992 by using commercial distribution methods rather than DOD warehouses to distribute medical supplies. They also achieved the shorter response times that are available through local commercial distributors. Pilot programs are not enough, we need to proceed quickly -- but prudently -- to broadly apply the lessons learned in these pilot programs across the department.

To do so, we must think more broadly of privatization and outsourcing. In particular, we need to pay more careful attention to incentives for implementing privatization and outsourcing initiatives. We have sufficient incentives at the top. The incentives need to be pushed down. This occurs when organizations gain ownership by sharing the savings.

I believe we are truly moving beyond adherence to the old conventional wisdom that dictated that we own all capabilities tied to support for the warfighter. We have selectively tested the effectiveness and efficiency of outsourcing various logistics support functions and they have been successful. Our immediate challenge now is to move forward with widespread deployment of similar outsourcing privatization efforts across a broad front.

## SUMMARY

In closing, let me underscore my own sense and that of the Department's senior leadership team about the value of FFRDCs. FFRDCs are critically important national assets. They have provided key contributions in the past—contributions that I'm personally familiar with. And they will address critical needs now and in the future.

FFRDCs are the kind of assets that take a very long time to develop. Unfortunately, they can be destroyed in a short period of time by a few damaging actions. We are now making progress convincing the Congress of this fact. But there is more to do, and I am personally committed to working with the Congress to remove arbitrary constraints on the operation of our FFRDCs. I am cautiously optimistic that we will be successful in reaching this objective.

The work of the FFRDCs—like LMI—is not over. I see an increasing—not decreasing—need for the kind of specialized studies and analysis skills that can help the Department re-engineer its logistics processes to reduce response times and excess infrastructure. After several years of decline due to congressionally mandated ceilings, we were able in fiscal 1997 to increase the level of effort consistent with your sponsor's core requirements.

The late David Packard once said, "Defense... is the largest and the most important business enterprise in the world. It deserves to be managed with the highest standards." I think we would have great difficulty in managing to the highest standards without your support.

Thank you all.